What is claimed is:

1. A testing method for a magnetic hard disk or a magnetic head in a test system comprising:

a moving step in which the magnetic head, which moves to fly closely over the magnetic disk, moves to a predetermined radial position corresponding to the position data of the magnetic disk which rotates at a predetermined constant speed;

a reading step in which imbedded position data is read out for each sector of the magnetic disk is by the magnetic head; and

a reading/writing step in which a predetermined signal is written in or read out from a data area of the sector by the magnetic head when the position data is one of equal to a predetermined value and within a predetermined range.

2. A testing method for a magnetic hard disk or a magnetic head in a test system comprising:

a moving step in which the magnetic head moves to fly closely over the magnetic disk to a predetermined radial position corresponding to a position data of the magnetic disk which rotates at a predetermined constant speed;

a writing step wherein for each sector of at least one track, imbedded position data is read out, a predetermined signal is written in a data area of the sector immediately thereafter, and the read position data is stored, said writing step being performed for at least one rotation of said magnetic disk;

a first reading step in which the imbedded position data is read out from each sector of said track by the magnetic head and data of the data area of the sector is read out and stored, when the read position data is one of equal to the stored position data corresponding to the sector data and a difference therebetween is within an allowable range, the data reading and storing operations being performed for at least one rotation of the magnetic disk;

a data overwriting step in which the imbedded position data is read out from each sector of the track by the magnetic head and another signal is written in the data area of the sector, when the read position data and the stored position data corresponding to the sector data are one of the same as each other and a difference therebetween is within an allowable range, the data reading and writing operations being performed for at least one rotation of the magnetic disk; and

a second reading step in which the overwritten position data is read out from each sector of the track by the magnetic head and the data of the data area of the sector is read out, when the read position data and the

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stored position data corresponding to the sector data are one of the same as each other and a difference therebetween is within an allowable range.

3. The testing method for a magnetic hard disk or a magnetic head according to claim 2, further comprising:

an erasing step which is performed between the moving step and the writing step, wherein a data area is erased only for each sector having a specified band area centered at the target track position.

4. The testing method for a magnetic hard disk or a magnetic head according to claim 2, wherein said predetermined signal is written at a low frequency during the data writing step and said another signal is overwritten at a high frequency during the overwriting step.

5.   A testing method for a magnetic hard disk or a magnetic head in a test system comprising:

a moving step in which the magnetic head moves to fly closely over the magnetic disk to a predetermined radial position corresponding to a position data of the magnetic disk which rotates at a predetermined constant speed;

a data writing step in which imbedded position data is read out for each sector of at least one track, wherein when the read position data is one of equal to a predetermined target position data corresponding to the sector data and a difference therebetween is within an allowable range, a predetermined signal is written in a data area of the sector, said writing step being performed for at least one rotation of said magnetic disk;

a first reading step in which the imbedded position data is read out from each sector of said track by the magnetic head and data of the data area of the sector is read out, when the read position data is one of equal to the predetermined target position data corresponding to the sector data and a difference therebetween is within an allowable range, the data reading and storing operations being performed for at least one rotation of the magnetic disk;

a data overwriting step in which the imbedded position data is read out from each sector of the track by the magnetic head and another signal is written in the data area of the sector, when the read position data and the predetermined target position data corresponding to the sector data are one of the same as each other and a difference therebetween is within an allowable range, the data reading and writing operations being performed for at least one rotation of the magnetic disk; and

a second reading step in which the overwritten position data is read out from each sector of the track by

the magnetic head and the data of the data area of the sector is read out, when the read position data and the predetermined target position data corresponding to the sector data corresponding to the sector data are one of the same as each other and a difference therebetween is within an allowable range.

6. The testing method for a magnetic hard disk or a magnetic head according to claim 5, wherein said predetermined signal is written at a low frequency during the data writing step and said another signal is overwritten at a high frequency during the overwriting step.

7. A read/write method for a magnetic hard disk and a magnetic head in a test system comprising:

a moving step in which the magnetic head moves to fly closely over the magnetic disk to a predetermined track of the magnetic disk;

a data reading and writing step wherein for each sector of at least one track, imbedded position data is read out, and a predetermined signal is written in a data area of the sector immediately thereafter, and the read position data is stored; and

a reading step in which the imbedded position data is read out from each sector of said track by the magnetic head and data of the data area of the sector is read out and stored, when the read position data is one of equal to the stored position data corresponding to the sector data and a difference therebetween is within an allowable range, the data reading and storing operations being performed for at least one rotation of the magnetic disk.

8. The read/write method for a magnetic hard disk or a magnetic head in a test system according to claim 7, further comprising:

a data overwriting step in which the imbedded position data is read out from each sector of the track by the magnetic head and another signal is written in the data area of the sector, when the read position data and the stored position data corresponding to the sector data are one of the same as each other and a difference therebetween is within an allowable range, said data reading and writing operations being performed for at least one rotation of the magnetic disk.

9. The read/write method for a magnetic hard disk or a magnetic head in a test system according to claim 8, further comprising:

a second reading step in which the overwritten position data is read out from each sector of the track by the magnetic head and data of the data area of the sector is read out, when the read position data and the stored position data corresponding to the sector data are one of the same as each other and a difference therebetween is within an allowable range.

10. The read/write method for a magnetic hard disk or a magnetic head according to claim 7, wherein said predetermined signal is written at a low frequency during the data writing step.

11. The read/write for a magnetic hard disk or a magnetic head according to claim 8, wherein said another signal is overwritten at a high frequency during the overwriting step.

12. A side erase method for a magnetic hard disk and a magnetic head in a test system comprising:

a first moving step in which the magnetic head moves to fly closely over the magnetic disk to a predetermined radial position corresponding to a position data of the magnetic disk which rotates at a predetermined constant speed;

a writing step in which imbedded position data is read out for each sector of at least one track, wherein when the read position data is one of equal to a predetermined target position data corresponding to the sector data and a difference therebetween is within an allowable range, a predetermined signal is written in a data area of the sector, said writing step being performed for at least one rotation of said magnetic disk;

a second moving step in which the magnetic head moves to one of plural target positions that are located on the outer circumference side of the reference position and one of plural target positions that are located on the inner circumference side of the reference position; and

an erasing step in which the data of the data area of the sector is erased when the read position data is the same as a predetermined value or is within a predetermined range only on the sector of which the position data read in the target position.

13. A testing method for a magnetic hard disk or a magnetic head in a test system comprising:

a moving step in which the magnetic head moves to fly closely over the magnetic disk to a predetermined radial position corresponding to a position data of the magnetic disk which rotates at a predetermined constant speed;

a data writing step in which a predetermined encoded digital data is written on the data area of each sector while the sectors imbedded position data is read out and stored, said writing step being performed for at least one rotation of said magnetic disk;

a reading step in which the encoded data of each sector is read out for data error detection when the read position data of that sector is one of equal to the stored position data at the writing step and a difference therebetween is within an allowable range, said reading step being performed for at least one rotation of the magnetic disk.

14. The testing method for a magnetic hard disk or a magnetic head according to claim 13, wherein the reading step is performed for all or selected sectors while imbedded position data for the corresponding sectors are read out and stored, the reading step being performed for at least one rotation of the magnetic disk, said reading step being followed by a data error calculation process using one of the stored position data for valid sector selection and bathtub curve measurement.

15. A test system for testing a magnetic hard disk or a magnetic head in a test system comprising:

a magnetic hard disk in which imbedded position data is formatted for each sector of tracks thereof, and which rotates at a predetermined constant rotation speed;

a magnetic head;

a magnetic head moving mechanism which holds the magnetic head and which moves the magnetic head to a predetermined position in a radial direction of the magnetic disk, said magnetic head flying closely over the magnetic disk; and

a movement control device for driving the magnetic head moving mechanism and moving said magnetic head moving mechanism to a predetermined radial position corresponding to the position data;

wherein the imbedded position data for each sector of the magnetic disk is read; and

a predetermined signal is one of written in and read out from a data area of the sector, when the position data is one of equal to a predetermined value and within a predetermined range.